

C. Remarks

The claims are 1-7, with claims 1, 3 and 6 being independent. The independent claims have been amended to better define the present invention. Support for the amendment may be found throughout the specification, for instance, at page 9, lines 14-25, and page 12, lines 9-15. Claims 4 and 5 have been amended to reflect the changes in claim 3. No new matter has been added. Reconsideration of the present claims is expressly requested.

Claims 1, 3, and 6 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent Application Publication No. 2002/0001744 A1 (Tsusaka). Claims 2 and 5 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Tsusaka in view of U.S. Patent No. 6,218,035 B1 (Fuglevand). Claims 4 and 7 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Tsusaka in view of U.S. Patent No. 6,523,699 B2 (Akita). The grounds of rejection are respectfully traversed.

Prior to addressing the merits of rejection, Applicants would like to briefly discuss some of the features of the presently claimed invention. That invention, in pertinent part, is related to a membrane electrode assembly for a proton-exchange membrane fuel cell, a method for its production, and a proton-exchange membrane fuel cell that includes this assembly. The presently claimed assembly comprises a polymer electrolyte membrane and an electrode metal catalyst layer. The polymer electrolyte membrane is formed by polymerizing a composition containing at least a compound having proton conductivity and a compound having activity to an active energy ray, or a

composition containing at least a compound having proton conductivity and activity to the active energy ray. Importantly, at least a part of the polymer electrolyte membrane infiltrates into the electrode metal catalyst layer. The infiltration is due to the coating of the electrode catalyst layer with a liquid solution of the aforementioned compounds, thereby increasing the contact between the electrolyte membrane and the catalyst, prior to polymerization.

Tsusaka is directed to a membrane electrode assembly and solid polymer electrolyte fuel cells. Specifically, Tsusaka discloses, at paragraph [0025], a membrane electrode assembly that has a pair of electrodes bonded to both surfaces of a solid polymer electrolyte membrane having a first conductive path, with the electrodes each having a catalyst layer. The catalyst layer of at least one of the electrodes has a second conductive path and contains a first metalloxane polymer in an intra-catalyst-layer electrolyte including an electrode catalyst. The solid polymer electrolyte membrane preferably includes a second metalloxane polymer.

Applicants respectfully submit, however, that Tsusaka fails to disclose or suggest an electrode metal catalyst layer as presently claimed. The catalyst layer in this reference is polymeric.

Applicants also submit that Tsusaka does not disclose or suggest infiltrating polymer electrolytes as claimed into the catalyst layer. Tsusaka, as mentioned above, discloses using separate metalloxane polymers in the catalyst and the membrane, which can then be bonded, i.e., no actual infiltration of the polymer electrolyte, as recited, for instance, in claim 3, takes place.

Neither Fuglevand nor Akita can cure the deficiencies of Tsusaka. As previously discussed, neither of these references is concerned with infiltration as claimed.

Accordingly, Applicants respectfully submit that the cited documents, whether considered separately or in any combination, do not disclose or suggest all of the presently claimed elements.

Wherefore, withdrawal of the outstanding rejections and passage of the application to issue are respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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